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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,864	04/12/2001	Mo-Han Fong	12452ROUS02U	5199

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EXAMINER

MATTIS, JASON E

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/833,864

Applicant(s)

FONG ET AL.

Examiner

Jason E Mattis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 and 13-17 is/are allowed.
- 6) ☒ Claim(s) 8-12 is/are rejected.
- 7) ☒ Claim(s) 18-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 8 is objected to because of the following informalities: Claim 8 line 6 states, "the wireless communication system element". Claim 8 is objected to because "the wireless communication system element" has no antecedent basis. Appropriate correction is required.

Claims 9, 10, 11, and 12 are also objected to because they are dependent on claim 8.

2. Claim 18 is objected to because of the following informalities: Claim 18 lines 5-6 state, "the Radio Frequency unit". Claim 18 is objected to because "the Radio Frequency unit has no antecedent basis. Appropriate correction is required.

Claims 19 and 20 are also objected to because they are dependent on claim 18.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 8, 9, 10, 11, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Kumar et al. (U.S. Pat. 6507572).

With respect to claim 8, Kumar et al. discloses a method of managing the contents of a plurality of buffers, queues, in a wireless communication system to service forward link data transmissions for a mobile station, mobile unit 112 **(See column 6 lines 30-36 and item 112 in Figures 1 and 2 of Kumar et al. for reference to queuing packets of forward-link data for transmission to a mobile unit 112)**. Kumar et al. also discloses receiving data in a central buffer, queue, of a network element, frame selection/distribution function 106, of a wireless communication system **(See column 6 lines 59-63 and item 106 in Figures 1 and 2 of Kumar et al. for reference to queuing packets of forward-link data at a data distribution function of a wireless communication system)**. Kumar et al. further discloses the network element, frame selection/distribution function 106, managing a plurality of base stations 110 of the wireless communication system **(See column 1 lines 37-39 and items 106 and 110 in Figure 1 of Kumar et al. for reference to FSD function 106 managing base stations 110 by distributing frames of data to them)**. Kumar et al. also discloses downloading a plurality of blocks of data from the central buffer, the queue of the frame selection/distribution function 106, to each of a plurality of distributed buffers, queues, resident in a plurality of base stations 110 servicing the mobile station, mobile unit 112 **(See column 6 line 66 to column 7 line 23 for reference to queuing packets of forward-link data at both a current primary base station, step c, and at another base station, step h)**. Kumar et al. further discloses transmitting blocks of data from a serving base station, current primary base station, of the active set of base stations to the mobile station, mobile unit 112 **(See column 6 lines 30-36 and items**

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110 and 112 in Figures 1 and 2 for of Kumar et al. reference to transmitting packets of forward-link data from the current primary base station to the mobile unit). Kumar et al. also discloses determining that distributed buffer refresh is required and downloading a next plurality of blocks of data from the central buffer, queue of the frame selection/distribution function 106, to each of the plurality of distributed buffers, queues of the base stations 110, servicing the mobile station, mobile unit 112 (**See column 2 lines 45-55 and items 106, 110, and 112 in Figure 2 of Kumar et al. for reference to FSD function 106 receiving forward-link packets and forwarding the packets to all base stations 110 currently in soft handoff with the mobile unit 112).**

With respect to claims 9 and 10, Kumar et al discloses that the central buffer, the queue of the frame selection/distribution function 106, and the plurality of distributed buffers, the queues of the base stations 110, support radio link protocol (**See column 1 lines 22-58 and items 104, 106, and 110 in Figure 1 of Kumar et al. for reference to the wireless communication system supporting a radio link protocol function 104).** Since the system of Kumar et al. supports radio link protocol, which is a link layer protocol, the central buffer, queue of the frame selection/distribution function 106, and distributed buffers, queues of the base stations 110, both support link layer buffering operations.

With respect to claim 11, Kumar et al. discloses only one base station, the current primary base station, of the active set of base stations 110 forwarding link transmissions to the mobile station, mobile unit 112, at any particular time (**See column 6 line 59 to column 7 line 23 and items 110 and 112 in Figures 1 and 2 of Kumar et**

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al. for reference to transmitting forward-link packets form only the base station which is designated the current primary base station at any one time).

With respect to claim 12, Kumar et al. discloses the network element, frame selection/distribution function 106, being a base station controller (See column 1 line 22 to column 2 line 19 and items 106 and 110 Figure 1 of Kumar et al. for reference to frame selection/distribution function 106 acting as a base station controller to base stations 110 by performing functions such as frame distribution and reception to and from base stations).

5. Claims 1, 2, 3, 4, 5, 6, 7, 13, 14, 15, 16, and 17 are allowed.

6. The following is an examiner's statement of reasons for allowance: **Claims 1 and 13 are allowable** over the prior art of record since the cited reference taken individually or in combination fail to particularly disclose **a first block of data downloaded including an initial sequence number that is used to compare with the sequence number of a block successfully received by the mobile station, and when the sequence number of the block of data successfully received exceeds the initial sequence number by a threshold value, downloading a next plurality of blocks of data from a central buffer to each of the plurality of base stations that define the active set of base stations servicing the mobile base station.** It is noted that the closest prior art, Kumar et al., shows a system in which sequence numbers of frames of data are used during handoff from one base station to another base station. However, Kumar et al. fails to disclose that the initial frame of data is given an initial sequence number which is compared to the sequence number of the last frame of data received,

and when the sequence number of the last frame of data received exceeds the initial sequence number by a threshold, downloading a next plurality of frames of data to all active base stations. **Claims 2, 3, 4, 5, 6, and 7 are allowable** over the prior art of record since they all add further limitations to allowable claim 1. **Claims 14, 15, 16, and 17 are allowable** over the prior art of record since they all add further limitations to allowable claim 13.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Boudreaux (U.S. Pat. 6466556) discloses a method of accomplishing handover in a wireless system, which uses link layer protocol. Bautz et al. (U.S. Application 09/113311) discloses a system that uses data sequence numbers for performing optimized handover in a wireless system.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E Mattis whose telephone number is (703) 305-8702. The examiner can normally be reached on M-F 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (703) 305-4798. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

jem


RICKY NGO
PRIMARY EXAMINER